| S&H Form: PTO/SB/05 (2/01) | o To | |
|---|--------|--|
| Attorney Docket No. 1293.1258 | 989 | |
| First Named Inventor or Application Identifier: Sung-cheol KIM et al. | 09/987 | |

UTILITY PATENT APPLICATION

TRANSMITTAL

(Only for original applications)

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

Express Mail Label No.

Assistant Commissioner for Patents Box Patent Application

Washington, DC 20231 1. 🛛 Fee Transmittal Form 2. Specification, Claims & Abstract [Total Pages: 19] 3. Drawing(s) (35 USC 113)[Total Sheets: 3] [FIGS. 1-4] 4. Oath or Declaration[Total Pages: __]

a. Newly executed (original or copy) b. Copy from a prior application (37 CFR 1.63(d)) i.

☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

5. 🔲 Verified Statement Claiming Small Entity Status

6. Application Data Sheet. See 37 C.F.R. 1.76

7. CD-Rom or CD-R in duplicate, large table or Computer Program (Appendix)

8. 🖂 Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)

a. Computer Readable Form (CRF)

b. Specification Sequence Listing on:

i. ☐ CD-ROM or CD-R (2 copies); or II. ☐ paper

c.

Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

Assignment (cover sheet & document(s)) to of for publication of assignee information under 37 CFR 1.215(b)

10. 37 CFR 3.73(b) Statement (when there is an assignee)

Power of Attorney

11. English Translation Document (if applicable)

12. X Information Disclosure Statement (IDS)/PTO-1449

13. Preliminary Amendment

14. Return Receipt Postcard (MPEP 503) (Should be specifically itemized)

15. X Certified Copy of Priority Document(s) (if foreign priority is claimed)

16. Request and Certification for Nonpublication under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent

17. Other:

18. CORRESPONDENCE ADDRESS



PATENT TRADEMARK OFFICE

| AMOUNT ENCLOSED \$ First Named Inventor Sung-cheol KIM et al. FEE CALCULATION (fees effective 10/01/00) CLAIMS (1) FOR (2) NUMBER (3) NUMBER (4) RATE (5) CALCULATIONS FILED EXTRA TOTAL CLAIMS 48 - 20 = 28 X \$ 18.00 = \$ 504.00 INDEPENDENT 17 - 3 = 14 X \$ 84.00 = 1176.00 CLAIMS (1) FOR CALAIMS (any number; + \$280.00 = 1176.00 INDEPENDENT 17 - 3 = 14 X \$ 84.00 = 1176.00 CLAIMS (1) FOR CALAIMS (11 X \$ 84.00 = 1176.00 CLAIMS (11 X \$ 84.00 = 1176.00 FEE CALCULATIONS FILE (11 X \$ 84.00 = 1176.00 FEE CALCULATIONS FILE (11 X \$ 84.00 = 1176.00 FEE CALCULATIONS FILE (11 X \$ 84.00 = 1176.00 FEE CALCULATIONS FEE CALCULATIONS FEE CALCULATIONS FEE CALCULATIONS FILE (11 X \$ 84.00 = 1176.00 FEE CALCULATIONS FEE CALCULATIONS FEE CALCULATIONS FEE CALCULATIONS FILE (11 X \$ 84.00 = 1176.00 FEE CALCULATIONS FEE CALCULATION FEE CALCULATIONS FEE CALCULATIONS FEE CALCULATION FOR CALCULATION FEE CALCULATION FEE CALCULATION FEE CALCULATION FOR | NEW APPLICATION | | | Attorney Docket No. 1293 | | | 1293 | .1258 | |
|--|--|--|--------------------|---|------------|-------------------|-------|---------------|--|
| ### Filing Date Filing Date Filing Date | | | | | | Unas | | | |
| TOTAL CLAIMS (1) FOR (2) NUMBER (3) NUMBER (4) RATE (5) CALCULATIONS (1) FOR (2) NUMBER (3) NUMBER (4) RATE (5) CALCULATIONS EXTRA (4) RATE (5) CALCULATIONS (5) CALCULATIONS EXTRA (4) RATE (5) CALCULATIONS (5) CALCULATIONS (4) RATE (5) CALCULATIONS (5) CALCULATIONS (6) CALCULATIONS EXTRA (4) RATE (5) CALCULATIONS (5) CALCULATIONS EXTRA (4) RATE (5) CALCULATIONS (176.00 1176.00 1176.00 1176.00 1176.00 1176.00 EXTRA FEE Total of above Calculations = Surcharge for late filing fee, Oath or Declaration (37 CFR 1.53(f)) (5) (\$130.00) Reduction by 50% for filing by small entity (37 CFR 1.27). TOTAL FILING FEE Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) TOTAL FEES Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) TOTAL FEES DUE = METHOD OF PAYMENT Check enclosed as payment. Check enclosed as payment. Check enclosed as payment. Check enclosed and no charges to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: 19-3935 Deposit Account No. 19-3935 The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain | | | Filing Date | | | | | | |
| TOTAL CLAIMS (1) FOR (2) NUMBER (3) NUMBER (4) RATE (5) CALCULATIONS | | | | | Sung | -cheol KIM et al. | | | |
| TOTAL CLAIMS 48 - 20 = 28 | | | ve 10/01/00) | | | | | | |
| INDEPENDENT 17 - 3 = 14 | | (1) FOR | (2) NUMBER | 1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | E | | | |
| CLAIMS MULTIPLE DEPENDENT CLAIMS (any number; + \$280.00 = | | TOTAL CLAIMS | 48 - 20 = | 28 | | X\$ 18. | = 00. | \$ 504.00 | |
| MULTIPLE DEPENDENT CLAIMS (any number; if applicable) MULTIPLE DEPENDENT CLAIMS (any number; if applicable) # \$280.00 = | | | 17 - 3 = | 14 | | X \$ 84 | = 00. | 1176.00 | |
| BASIC FILING FEE Total of above Calculations = Surcharge for late filing fee, Oath or Declaration (37 CFR 1.53(f)) (\$130.00) Reduction by 50% for filing by small entity (37 CFR 1.27). Reduction by 50% for filing by small entity (37 CFR 1.27). TOTAL FILING FEE = Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) METHOD OF PAYMENT Check enclosed as payment. Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. Deposit Account No. Deposit Account No. The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CIPs under 37 CFR 1.53(b) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G, McEwen Reg. No. 41,983 | | MULTIPLE DEPEN | DENT CLAIMS | (any numb | oer; | + \$280 | = 00 | | |
| Total of above | | if applicable) | > > | 1 | | C FILING | 3 | 740.00 | |
| Surcharge for late filling fee, Oath or Declaration (37 CFR 1.53(f)) (\$130.00) Reduction by 50% for filling by small entity (37 CFR 1.27). TOTAL FILING FEE = | | , , | | \$ | Tota | | | \$ 2420.00 | |
| Reduction by 50% for filing by small entity (37 CFR 1.27). TOTAL FILING \$ 2420.00 FEE = Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) TOTAL FEES \$ 2420.00 DUE = METHOD OF PAYMENT Check enclosed as payment. Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. 19-3935 Deposit Account No. 19-3935 STAAS & HALSEY LLP The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP | Surcharge for late filing fee, Oath or Declaration (37 CFR 1.53(f)) | | | | | | | | |
| Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) METHOD OF PAYMENT Check enclosed as payment. Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. Deposit Account No. 19-3935 STAAS & HALSEY LLP The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Reg. No. 41,983 | rainipa Colonia | (\$130.00) | for filing by sma | Il entity (3 | 7 CFR | 1.27). | | | |
| Surcharge for filing non-English language application (\$130.00; 37 CFR 1.52(d)) Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) TOTAL FEES \$ 2420.00 DUE = METHOD OF PAYMENT Check enclosed as payment. Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. Deposit Account Name STAAS & HALSEY LLP The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Pate Apon J S. 200. | | Reduction by 0070 | Tor mining by o.m. | <u>.</u> | 101 | AL FILIN | G | \$ 2420.00 | |
| Recordation of Assignment (\$40.00; 37 CFR 1.21(h)) TOTAL FEES \$ 2420.00 DUE = METHOD OF PAYMENT Check enclosed as payment. Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. 19-3935 Deposit Account Name STAAS & HALSEY LLP The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Reg. No. 41,983 | | Surcharge for filing non-English language application (\$130.00; | | | | | | | |
| METHOD OF PAYMENT ☐ Check enclosed as payment. ☐ Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filling date). GENERAL AUTHORIZATION ☐ If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. Deposit Account Name STAAS & HALSEY LLP ☐ The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filling fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Pate About 15 289 | 37 CFR 1.52(d)) | | | | | | | | |
| METHOD OF PAYMENT ☐ Check enclosed as payment. ☐ Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filling date). GENERAL AUTHORIZATION ☐ If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. ☐ 19-3935 ☐ Deposit Account Name ☐ The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filling fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen | | Recordation of As | Signifient (\$40.0 | <u>0, 01 01 10</u> | \$ 2420.00 | | | | |
| Check enclosed as payment. Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. 19-3935 Deposit Account Name STAAS & HALSEY LLP The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Pate No. 41,983 | | | | | | | | | |
| Charge "TOTAL FEES DUE" to the Deposit Account No. below. No payment is enclosed and no charges to the Deposit Account are authorized at this time (unless specifically required to obtain a filing date). GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. Deposit Account Name The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Reg. No. Abov. 15.320 | | | nt. | | | | | | |
| Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filling fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. Value V | Charge "TOTAL FEES DUE" to the Deposit Account No. below. | | | | | | | | |
| GENERAL AUTHORIZATION If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. Deposit Account Name The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Page. No. Applied Typed Name | No payment is enclosed and no charges to the Deposit Account are authorized at this time | | | | | | | | |
| If the above-noted "AMOUNT ENCLOSED" is not correct, the Commissioner is hereby authorized to credit any overpayment or charge any additional fees necessary to: Deposit Account No. | GENERAL AUTHORIZATION | | | | | | | | |
| Deposit Account Name STAAS & HALSEY LLP The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Pate No. 41,983 | If the above noted "AMOLINT FNCI OSED" is not correct, the Commissioner is nereby | | | | | | | | |
| The Commissioner is also authorized to credit any overpayments or charge any additional fees required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name James G. McEwen Pate No. 41,983 | | Deposit Account No | o. 19-3935 | | | _ | | | |
| required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. SUBMITTED BY: STAAS & HALSEY LLP Typed Name | | Deposit Account Na | ame STAAS | & HALSEY | LLP | | | | |
| SUBMITTED BY: STAAS & HALSEY LLP Typed Name | required under 37 CFR 1.16 (filing fees) or 37 CFR 1.17 (processing fees) during the prosecution of this application, including any related application(s) claiming benefit hereof pursuant to 35 USC 120 (e.g., continuations/divisionals/CIPs under 37 CFR 1.53(b) and/or continuations/divisionals/CPAs under 37 CFR 1.53(d)) to maintain pendency hereof or of any such related application. | | | | | | | | |
| Typed Name James G. McEwen Reg. No. 41,983 | SUBMITTER | DBY: STAAS & HAL | SEY LLP | | | | | 144.002 | |
| 1 7 Pata Nov. 15, 200 | | | | | | Reg. | No. | 41,983 | |
| Signature V Si | Signature | | 22 | | | Date | | Nov. 15, 2001 | |

© 2001 Staas & Halsey LLP